



Toolkit for managing carbapenemase-producing Enterobacteriaceae in non-acute and community settings

Annex G: Primary care quick reference guide

What are carbapenemase-producing enterobacteriaceae?

- Enterobacteriaceae are Gram-negative bacteria (including *Escherichia coli*, *Klebsiella* spp. and *Enterobacter* spp.) which naturally colonise the gut of humans and animals
- They commonly cause opportunistic urinary tract, intra-abdominal and bloodstream infections
- Carbapenemases are enzymes eg KPC, OXA-48, NDM and VIM, that destroy carbapenem antibiotics, thereby conferring resistance
- Carbapenem antibiotics, include meropenem, ertapenem, imipenem and doripenem, which are normally reserved for serious infections caused by drug-resistant Gram-negative bacteria
 - Colonisation with carbapenemase-producing enterobacteriaceae is more common than infection; the duration of colonisation is unclear

High risk groups ie at increased risk of being colonised/infected

- Those with a history of:
 - hospitalisation abroad, particularly those having received intensive care or undergone invasive treatment such as haemodialysis
 - hospitalisation in UK hospital with a high prevalence of carbapenemase-producing Enterobacteriaceae
 - being previously confirmed as a case or contact of a case
 - health tourism, seeking cosmetic or elective surgery abroad

What is required from primary care?

- On receipt of a positive result, inform and advise the patient (and/or family as appropriate) and care setting (Annex B-D)
- Prompt your local infection prevention and control teams and PHE centre to undertake risk assessment in relation to the patient and prevention of transmission (Toolkit Section A7)
- Seek advice from a local medical microbiologist for the management of infection (see below if colonised only); refer to secondary care for the management of severe infections
- Communicate status to any receiving health/social care providers (Annex A)

Screening and early detection (only if requested)	Not routinely used in community. If required, rectal swab by competent practitioner (stool sample second choice); swabs from wounds and device-related sites may provide additional information if requested.
Decolonisation	Neither skin nor gut decolonisation are recommended. There is no effective equivalent of the topical suppression used to reduce shedding of MRSA in the healthcare environment. Attempts at eradication of MDR Gram-negative organisms from the gastrointestinal tract have not been successful.
Treatment of infection	If an infection is due to carbapenemase-producing Enterobacteriaceae, discuss treatment with a microbiologist. If a patient with previous carbapenemase-producing Enterobacteriaceae colonisation or infection presents with a suspected infection that is likely to be caused by a Gram-negative organism and requires empirical antibiotics, a microbiologist should be contacted for advice on antibiotic choice.
Infection prevention and control	In your surgery, standard infection control practices will minimise the spread of this organism. Standard principles should be rigorously implemented but no additional infection control precautions are required (Section C1). Seek advice from your local IPC team or PHE centre if needed; where infection exists refer to risk assessment guidance for recommended measures to prevent the spread of infection (Section A7).
Communication	Include patient carbapenemase-producing Enterobacteriaceae status in all communications and within the patient record. It is crucial to communicate patient carbapenemase-producing Enterobacteriaceae status during referrals and inter-care patient transfer (Annex A).
References	<ul style="list-style-type: none"> • PHE: Toolkit for managing carbapenemase-producing Enterobacteriaceae in non-acute and community settings • PHE: Carbapenemase-producing Enterobacteriaceae: early detection, management and control toolkit for acute trusts available at https://www.gov.uk/government/publications/carbapenemase-producing-enterobacteriaceae-early-detection-management-and-control-toolkit-for-acute-trusts • NICE standard principles of prevention and control of infections in primary and community care available at http://bit.ly/NICE_StandardPrinciples_PrimaryCommunityCare